

**The Status of Breast Cancer in the Commonwealth**  
**Annual Report**  
**Fiscal Year 2012**



**Presented to the Governor and State Legislature**  
**By**  
**The Kentucky Women's Cancer Screening Program**  
**Division of Women's Health**  
**Department for Public Health**  
**Cabinet for Health and Family Services**



# **The Status of Breast Cancer in the Commonwealth**

## **Annual Report**

### **Fiscal Year 2012**

This report was prepared by  
The Kentucky Women's Cancer Screening Program  
Division of Women's Health  
Kentucky Department for Public Health  
in collaboration with  
The Breast Cancer Advisory Committee

#### **Kentucky Women's Cancer Screening Program Staff**

Joy Hoskins, RN, BSN, BA, *Director, Division of Women's Health*  
Rebel Baker, MSW, *Assistant Director, Division of Women's Health*  
Melody Stafford, RN, *Program Director*  
Sivaram Maratha, MS, MPA, *Epidemiologist*  
Carolyn Kerr, RN, BSN, *Clinical Coordinator*  
Deborah Donovan, RN, *Case Management Coordinator*  
Regina Reid, RN, *Case Management Coordinator*

#### **FY 2013 Breast Cancer Advisory Committee Members**

Elizabeth Amin, MD, *Chairperson, Radiologist*  
Debra Armstrong, *Director, Kentucky Cancer Program, University of Kentucky*  
Kayla Combs, *Office of Rural Health*  
Joy Hoskins, *Department for Public Health, Division of Women's Health*  
Eleanor Jordan, *Executive Director, Kentucky Commission on Women*  
Ann Marchal, *Breast Cancer Survivor*  
Donald Miller, MD, *James Graham Brown Cancer Center*  
Timothy Mullett, MD, *Lucille Parker Markey Cancer Center*  
Doris Rosenbaum, *Breast Cancer Survivor*  
Connie Sorrell, *Director, Kentucky Cancer Program, University of Louisville*  
Thomas Tucker, PhD, *Kentucky Cancer Registry*  
Barbara Vonderheide, *Breast Cancer Survivor*

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Division of Cancer Control and Prevention

Please direct requests for additional information to:

Kentucky Department for Public Health  
Division of Women's Health  
Kentucky Women's Cancer Screening Program  
275 East Main Street, HS1W-E  
Frankfort, Kentucky 40621

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COMMONWEALTH OF KENTUCKY  
OFFICE OF THE FIRST LADY

JANE K. BESHEAR  
FIRST LADY

700 CAPITOL AVENUE  
SUITE 102  
FRANKFORT, KY 40601  
(502) 564-2611  
FAX: (502) 564-8154



My Fellow Kentuckians:

Breast cancer is the second leading cause of cancer deaths among Kentucky women and continues to be a leading public health concern in the Commonwealth. We remain steadfast in our commitment to emphasizing the most powerful weapons we have in fighting this disease: awareness, regular screenings and early detection.

The "Annual Report on the Status of Breast Cancer in the Commonwealth for Fiscal Year 2012" demonstrates the results of the tremendous efforts put forth by the Kentucky Women's Cancer Screening Program (KWCSP) in the Kentucky Department for Public Health and its partners. The KWCSP provides breast and cervical cancer screening services and prompt referrals for treatment to eligible women in the Commonwealth. In FY 2012, more than 13,534 screening mammograms were provided to KWCSP eligible women. A total of 64 cases of breast cancer were detected through local health department KWCSP screenings in FY 2012.

The KWCSP is vital to improving the health of Kentucky women and providing accurate quantitative health information. This report exemplifies the imperative need for this program and the crucial services it provides. Because of increased screening efforts by the KWCSP and other health care providers, in collaboration with a strong network of community partnerships, women's lives are being saved.

I am proud to support KWCSP's efforts through *Horses & Hope*, an initiative to promote breast cancer awareness and provide education and screening to uninsured women working in Kentucky's signature horse industry. For more information on *Horses & Hope* please visit [www.horsesandhope.org](http://www.horsesandhope.org).

Thank you for your interest in the health of Kentucky women. Only through shared responsibility and working together can we truly succeed in improving the health of every Kentuckian.

Best Wishes,

Jane K. Beshear,  
First Lady of Kentucky



CABINET FOR HEALTH AND FAMILY SERVICES  
Department for Public Health

Steven L. Beshear  
Governor

Division of Women's Health  
275 East Main Street, H51WF  
Frankfort, KY 40621  
502-564-3236  
Fax: 502-564-1552

Audrey Tayse Haynes  
Secretary

MESSAGE FROM THE COMMISSIONER

The Kentucky Women's Cancer Screening Program (KWCSP), in collaboration with the Breast Cancer Advisory Committee (BCAC), is pleased to present the "Annual Report on the Status of Breast Cancer in the Commonwealth for Fiscal Year 2012". This report provides an overview of the KWCSP and a summary of achievements during FY 2012 as well as the burden of breast cancer among women in Kentucky.

Since 1990, a total of 300,673 screening mammograms have been performed through local health departments in Kentucky. During FY 2012, 13,554 screening mammograms were provided through local health departments with 11,096 provided to KWCSP eligible women. Additionally, since 2002, the KWCSP has referred more than 4,357 patients to the Kentucky Department for Medicaid Services Breast and Cervical Treatment Program for cancer treatment services of the breast or cervix.

In FY 2012, Kentucky was recognized as one of 12 states among 68 states and tribes that met all of the core performance indicators on the quality of breast and cervical cancer services assessed by the Centers for Disease Control and Prevention (CDC). This accomplishment has been reached for 15 consecutive submissions.

I would like to express my appreciation to communities and healthcare providers across the Commonwealth for their support in the promotion of breast cancer awareness, screening and prompt referral for treatment of the KWCSP patients with breast and cervical cancer. Through screening, early detection, prompt referrals and community outreach initiatives, we can make a tremendous difference in the health and lives of Kentucky's women.

Sincerely,

Stephanie Mayfield Gibson, MD, FCAP  
Commissioner for Public Health

## Executive Summary

Breast cancer has been a longstanding public health concern in Kentucky. Approximately 593 women die every year from breast cancer in the Commonwealth. To reduce the burden of breast cancer, the Kentucky Women's Cancer Screening Program (KWCSPP) has taken steps to emphasize early detection of the disease through public education and outreach activities, screening, diagnostic services, and prompt referrals to treatment services while assuring quality and partnering with organizations and individuals around the state.

In 1990, the Kentucky Department for Public Health was allotted state general funds for breast cancer screening services performed through local health departments. In 1998, the KWCSPP received federal funding for additional breast cancer screening services. The KWCSPP enrolls uninsured or underinsured women ages 21 to 64 with household incomes less than 250% of the federal poverty level. In the 23 years since the program's inception, 300,673 screening mammograms have been provided and 2,241 cases of breast cancer have been detected.

In FY 2012, the KWCSPP funded local health departments and other partners to provide clinical breast exams to 13,554 women and mammograms were provided to 11,096 KWCSPP eligible women. These women could not have otherwise afforded to be screened for breast cancer.

The KWCSPP made great strides in improving screening rates for the disparate populations through public education and outreach. In FY 2012, the KWCSPP recruitment staff collaborated with state partners to support outreach to women who have never been or are rarely screened. The KWCSPP supports targeted efforts to recruit African American, Hispanic, and other women from disparate populations for breast cancer screenings.

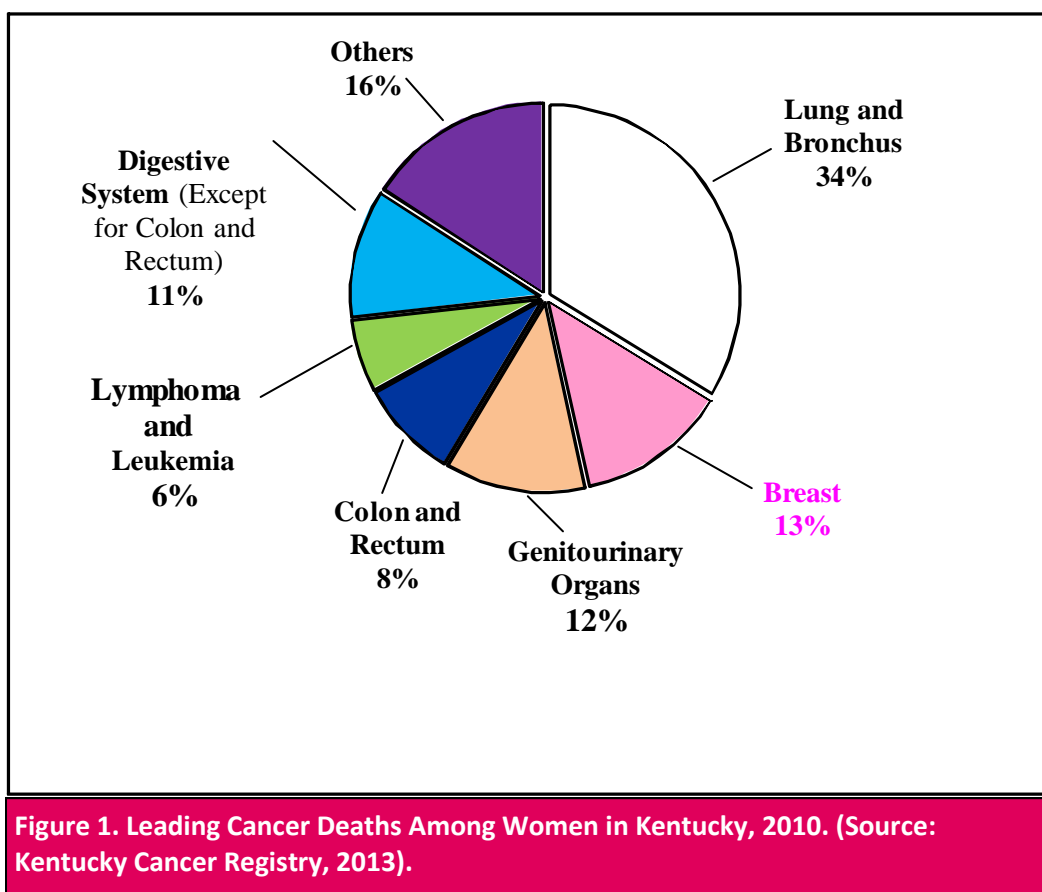
Current data shows the overall breast cancer mortality rate in rural and urban parts of the state are similar, whereas in the past rural areas had higher mortality rates. The KWCSPP is encouraged by this data which reflects, in part, successful outreach efforts. Reducing and removing barriers to screening and decreasing racial and geographic disparities will remain a priority for the program.

The KWCSPP assures the quality of breast cancer screening services and timely referrals for treatment services, an effort that is tracked and monitored by the Centers for Disease Control and Prevention (CDC) report of the program's 11 core performance indicators. Five of the 11 indicators assess quality of breast cancer services. According to the CDC, the KWCSPP met or exceeded the CDC standard for all performance indicators for the last 7.5 years, making the KWCSPP one of the highest quality programs in the country. Quality assurance tools developed by the KWCSPP are now used as models by other states.

Since 2002, the Kentucky Department for Medicaid Services (DMS) has partnered with the KWCSPP to provide treatment to women screened or diagnosed through the KWCSPP. The Breast and Cervical Cancer Treatment Program (BCCTP) allows women diagnosed through the KWCSPP to access treatment for pre-cancer or cancer of the breast. To date, over 4,357 Kentucky women have benefited from this partnership.

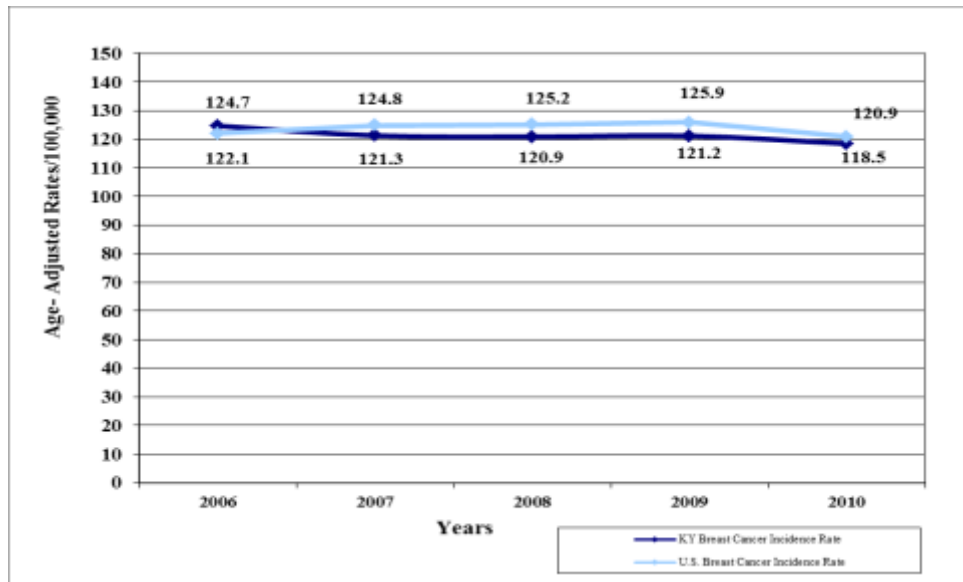
## Breast Cancer in Kentucky

Breast cancer is the most commonly diagnosed cancer among American women. According to the American Cancer Society (ACS), American women born today have a 1 in 8 lifetime risk of developing the disease. According to the most recent data available, breast cancer is the second leading cause of cancer deaths among women in Kentucky (Figure 1).



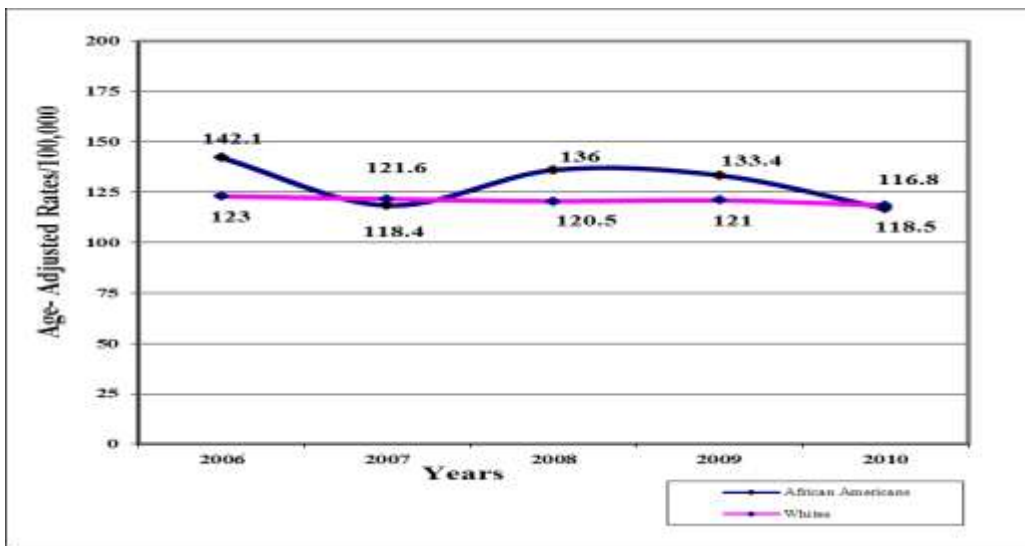
## Breast Cancer Incidence

Breast cancer incidence (the rate of new cases of breast cancer) in Kentucky women has declined every year since 2006; however, the U.S. female breast cancer incidence rates increased over the same time period. According to the Surveillance, Epidemiology and End Results (SEER) Program data of the National Cancer Institute for the years 2006 to 2010, the five year average age-adjusted female breast cancer incidence rate in Kentucky was 121.3 cases per 100,000 women, lower than the U.S. rate of 123.7 cases per 100,000 women (See Figure 2 for annual data for 2006 to 2010). Refer to Appendix A for invasive breast cancer incidence rates by county for 2010.



**Figure 2. Female Invasive Breast Cancer Incidence Rates, Kentucky vs U.S., 2006-2010 (Source: Kentucky Cancer Registry, 2013).**

Figure 3 shows the yearly age-adjusted breast cancer incidence rate by race from 2006 to 2010. The age-adjusted rate for African American women fluctuates from 142.1/100,000 in 2006 to 116.8/100,000 women in 2010. The age-adjusted rate for white women during that time period slightly decreased from 123.0/100,000 to 118.5/100,000 women. The five year average of these rates from 2006 to 2010 reflects a higher incidence of breast cancer among Non-Hispanic African American women in Kentucky (129.34 cases per 100,000) than among white women (120.92 cases per 100,000).

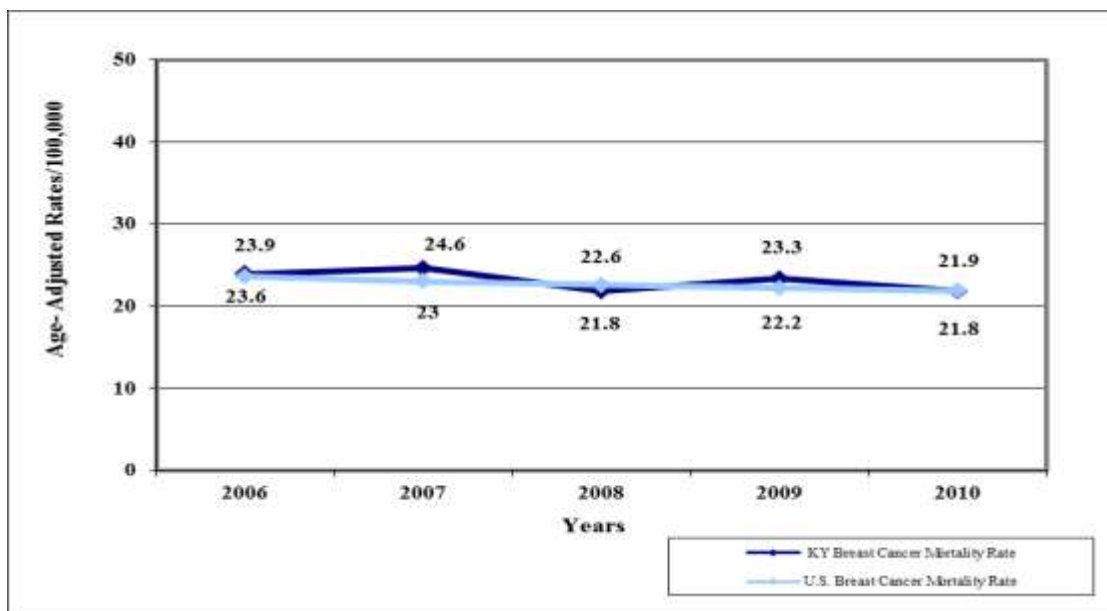


**Figure 3. Female Breast Cancer Incidence Rates by Race in Kentucky, 2006-2010 (Source: Kentucky Cancer Registry 2013).**



## Breast Cancer Mortality

National studies suggest a higher risk for breast cancer mortality in women with lower household income; less access to healthcare services for screening, diagnosis, and treatment; decreased outreach encounters; and later detection of the disease.



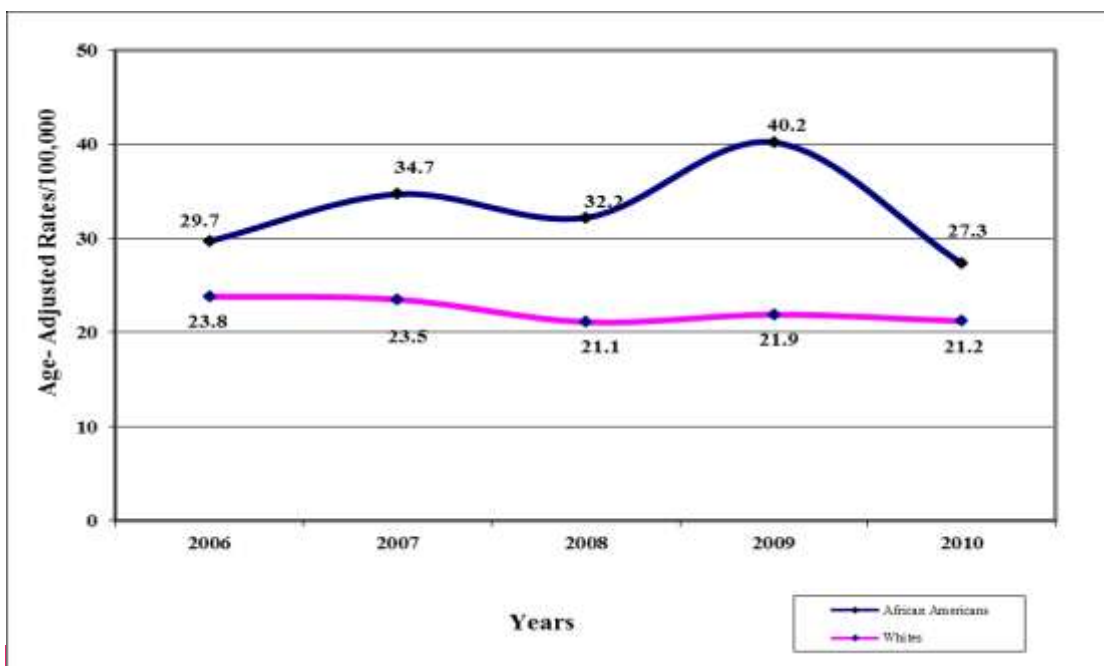
**Figure 4. Female Invasive Breast Cancer Mortality Rates, Kentucky vs U.S., 2006-2010**  
(Source: Kentucky Cancer Registry, 2013).

Breast cancer death rates in Kentucky, as well as nationally, have continued an overall downward trend over the five year period from 2006 to 2010 (Figure 4). In Kentucky, this rate ranged from 23.6/100,000 to 21.8/100,000, with the five year average breast cancer mortality rate during 2006 to 2010 as 23.8 deaths per 100,000 women. This rate was slightly higher than the average breast cancer mortality rate in the United States of 22.66 deaths per 100,000 women, which showed a decline from 23.9/100,000 in 2006 to 21.9/100,000 in 2010.

The trend in mortality rates was similar for urban and rural Kentuckian women. From 2006 to 2010, the age-adjusted mortality rate of breast cancer in women living in rural areas of Kentucky (22.79 deaths per 100,000 women) was comparable to the rate of women living in the urban areas of Kentucky (23.15 deaths per 100,000 women).

The most recent data from the Kentucky Cancer Registry (2010) revealed 10 counties in Kentucky had age-adjusted mortality rates due to breast cancer more than twice the state average age-adjusted rate (21.8/100,000 women). (See Map 2—Appendix A). These counties were: Owsley, Metcalfe, Powell, Clay, Marion, Magoffin, Leslie, Casey, Greenup and Livingston. However, the number of deaths due to breast cancer among these counties is too small to calculate a stable age adjusted rate.

Breast cancer mortality rates vary considerably across racial and ethnic groups in Kentucky as they do in the United States. African American women continue to die of breast cancer at a higher rate than any other racial or ethnic group, suggesting racial and ethnic disparities exist in Kentucky. The average annual age-adjusted breast cancer mortality rate in Kentucky from 2006-2010 was 22.3 cases per 100,000 white women and 32.8 cases per 100,000 African American women. Figure 5 shows the annual rates of breast cancer mortality by race for years 2006 to 2010. Of note is the decrease in the rate of breast cancer mortality in African-American women during this time period which was 29.7/100,000 women in 2006 compared to 27.3/100,000 women in 2010. This overall decrease compares to the slight decline in breast cancer mortality in white women from 23.8/100,000 in 2006 to 21.2/100,000 women in 2010.

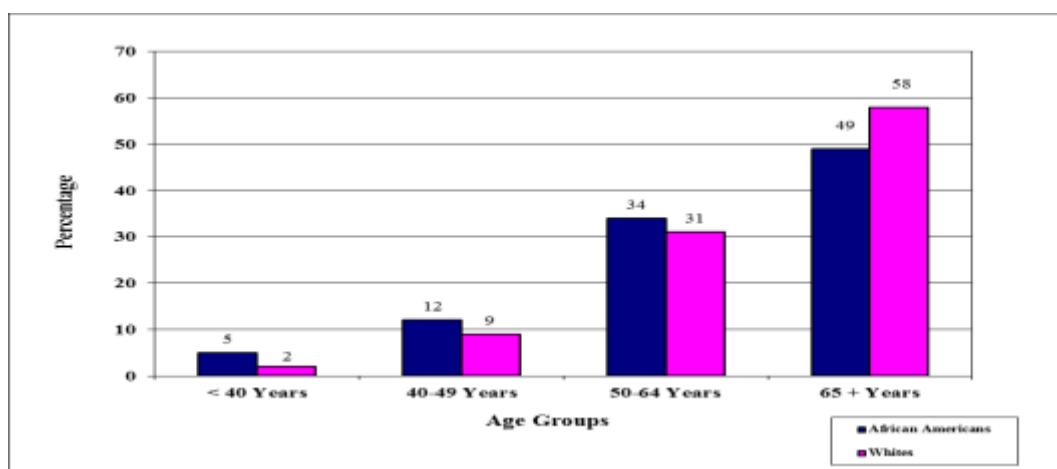


**Figure 5. Female Breast Cancer Mortality Rates by Race in Kentucky, 2006-2010**  
(Source: Kentucky Cancer Registry, 2013).

The observed higher mortality among African American women may be the result of later detection of the disease among this demographic. In Kentucky from 2006 to 2010, an average of 35% of breast cancer cases in African American women were found in the late stages versus an average of 30% in white women. In previous years, African American women ages 50 to 64 years old have had a higher mortality rate compared to white women in the same age group.

The latest data available (Figure 6) demonstrates a need to continue outreach initiatives to assure access to services and to promote early detection and prompt treatment after diagnosis among African Americans.

Given the small number of Hispanic women in the general Kentucky population (3.2% in 2012), available data for breast cancer mortality among Hispanic women is not sufficient to support reliable inferences. The Kentucky Women's Cancer Screening Program continues to assess breast cancer mortality trends among this population.



**Figure 6. Percentage of Kentucky Women who died due to Breast Cancer by Age Groups and Race, 2006-2010 (Source: Kentucky Cancer Registry, 2013).**

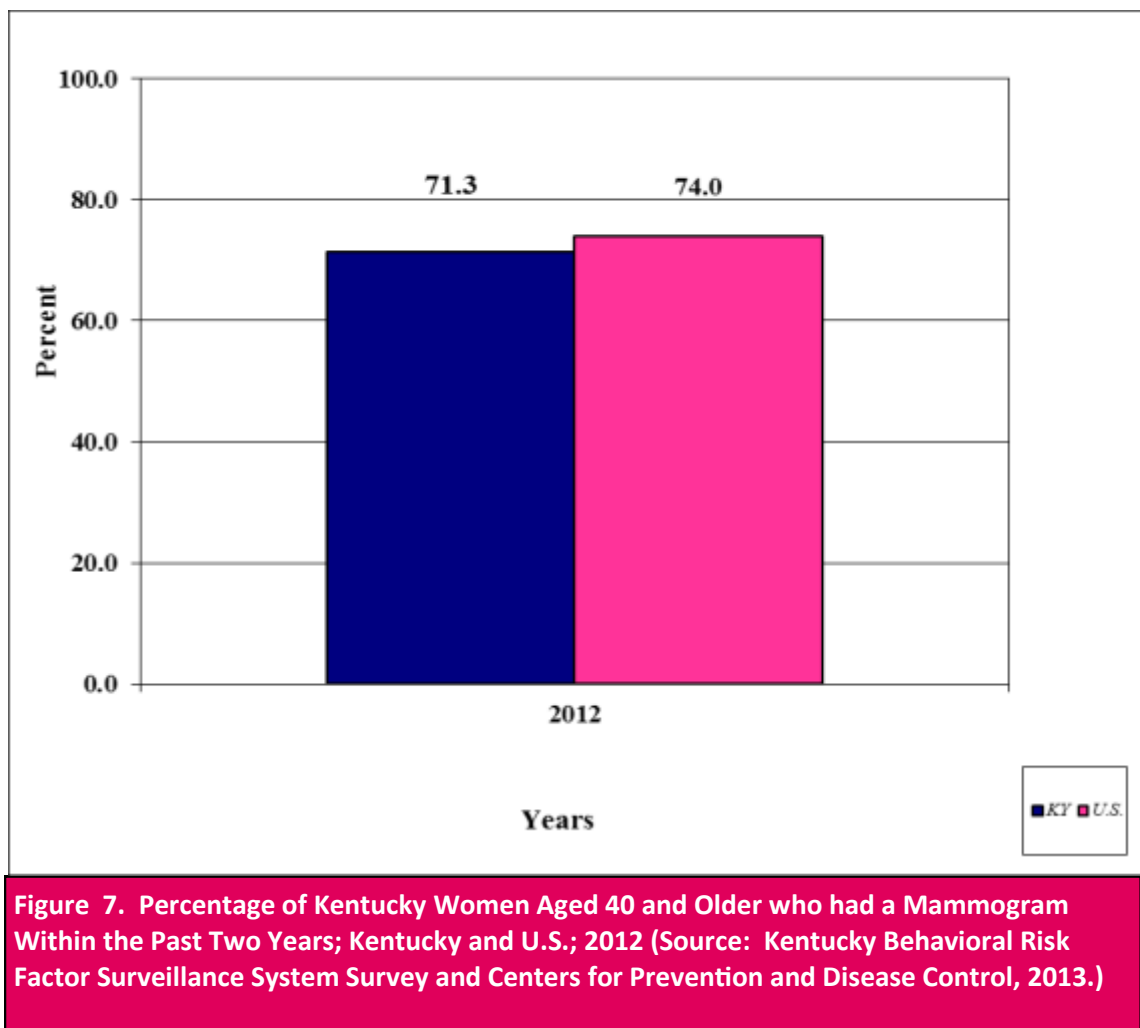
## Breast Cancer Screening

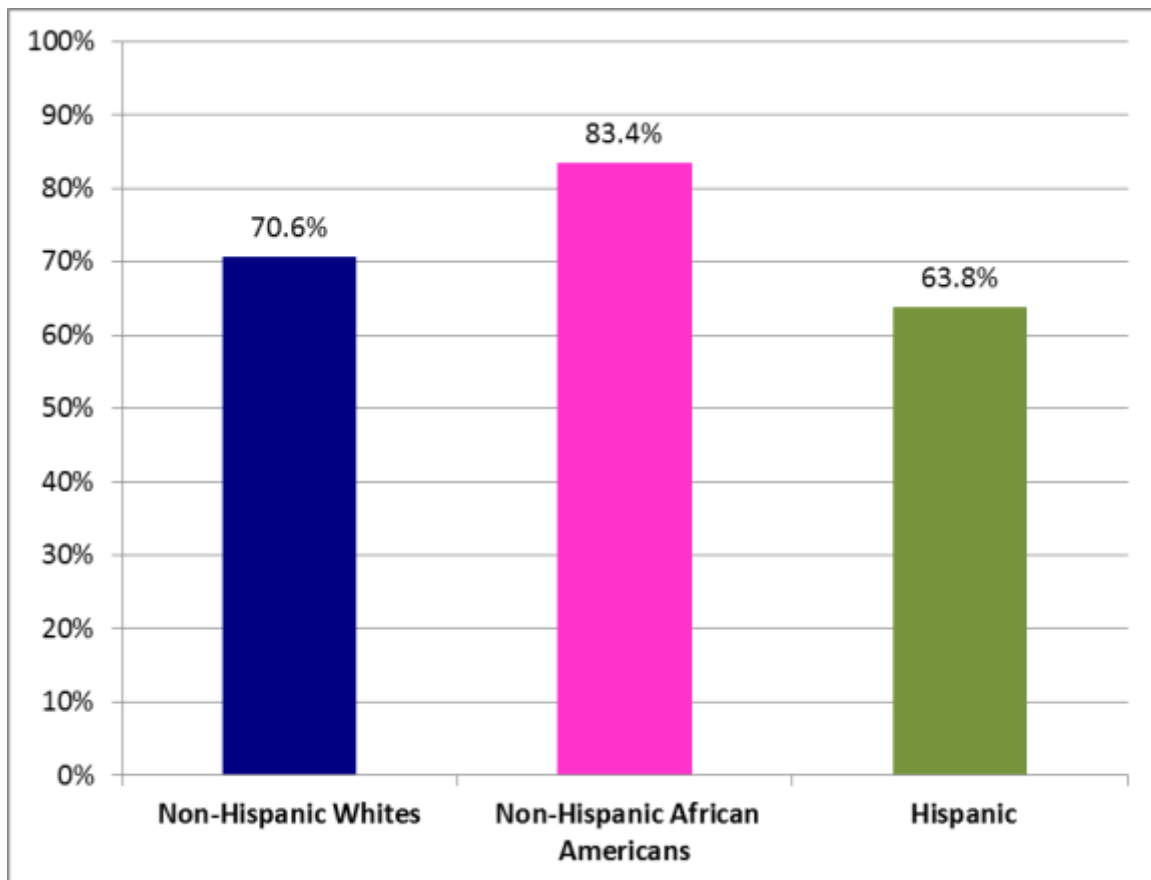
National screening guidelines endorsed by the CDC, American College of Obstetricians and Gynecologists (ACOG), and the American Cancer Society (ACS) recommend that clinical breast exams be provided for women beginning at age 21 and annual screening mammograms be provided for women beginning at age 40.

According to the Kentucky Behavioral Risk Factor Surveillance System Survey (BRFSS), Kentucky women aged 40 and older received screening mammograms at a consistent rate and at a rate similar to the U.S. rate (Figure 7). The BRFSS prevalence data should be considered a baseline year for data analysis as data is not directly comparable to previous years of BRFSS data because of changes in weighting methodology and the addition of the cell phone sampling.

Many women not receiving routine mammograms live in medically underserved areas where screening is not readily available or affordable while others may not know the importance of regular screening. A special emphasis has been placed on screening women who reside in the Appalachian region of Kentucky.

In FY 2012, KWCSP's goal was to screen 6,000 Appalachian women ages 40-64, of which 4,941 (82%) were screened. Outreach efforts must continue until all women can access regular screenings, diagnosis, and treatment to eliminate the burden of breast cancer.





**Figure 8. Percentage of Kentucky Women Aged 40 and Older who had a Mammogram Within the Past Two Years by ethnicity in Kentucky in 2012 (Source: Kentucky Behavioral Risk Factor Surveillance System Survey and Centers for Prevention and Disease Control, 2013.)**

The 2012 Kentucky BRFSS indicated that a higher percentage of non-Hispanic African American women (83.4%) aged 40 years and above had a mammogram done within the past two years as compared to non-Hispanic white women (70.6%).<sup>1</sup>

According to the same survey, a lower percentage (63.8%) of Hispanic women aged 40 years and above had a mammogram done within the past two years as compared to non-Hispanic white women and non-Hispanic African American women.<sup>2</sup>

<sup>1</sup>An oversampling methodology was used for the non-Hispanic African American population to achieve a sample large enough to make generalizations about the data. This ensures the final data sample includes a sufficient number of African American respondents.

<sup>2</sup>The BRFSS sample does not include a sufficient number of Hispanic respondents to make generalizations about that population in Kentucky. Please use caution when interpreting this result.

## Kentucky Women's Cancer Screening Program

In response to the issue of breast and cervical cancers, the Kentucky General Assembly passed Senate Bill 41 in the 1990 Regular Session which established the Kentucky Women's Cancer Screening Program (KWCSPP) to provide high quality breast and cervical cancer screening services at a low or reduced cost to women in all of Kentucky's 120 counties. In FY 2012, the KWCSPP allocated approximately \$2.4 million of state General Funds to the local



health departments (LHDs) through a Preventive Block Grant for this purpose. In addition local health departments contributed \$1.5 million through local tax dollars to support screening services that fiscal year. Since 1998, the program has been able to provide screening and diagnostic services to more patients with the availability of approximately \$2.6 million from the Centers for Disease Control and Prevention (CDC) through the National Breast and Cervical Cancer Early Detection Program. The mission of the KWCSPP is carried out through preventive health programs at the local health departments and other partners. Women to be screened are seen initially in local health departments by registered nurses or other practitioners who provide instruction in breast self-examination and perform clinical breast exams (CBE). In accordance with nationally recommended screening guidelines, annual clinical breast exams are provided for patients beginning at age 21 and annual screening mammograms are provided for patients beginning at age 40. Local health departments contract with local providers for screening mammograms and for follow-up diagnostic tests as clinically indicated.

### Eligibility Criteria

The KWCSPP serves women who may not otherwise receive breast cancer screening services. These women are ages 21 to 64 years old, have a household income of 250% or less of the federal poverty guidelines, and are uninsured or underinsured. Women with household incomes below 100% of the poverty level receive services at a minimal cost, and women with household incomes between 100 and 250% of the poverty level are charged according to a sliding fee schedule. However women are never denied services due to an inability to pay.

Women receive breast cancer screening services appropriate to their age. Women 21 to 39

years of age receive CBEs and screening mammography services if they have been previously diagnosed with breast cancer, have had chest wall radiation, have an abnormal CBE, or have a family history of pre-menopausal breast cancer. Women 40 to 64 years old receive clinical breast exams and annual mammograms. Women not meeting the eligibility criteria for services through the KWCSF may be referred to other programs for cancer screening services.

## **Provision of Services**

Breast cancer screening services are provided by a physician, nurse practitioner, or a specially trained registered nurse at a local health department or contracted healthcare provider. A cancer screening visit may include a health history, risk reduction counseling, a physical examination including a Pap test, a pelvic exam, a clinical breast exam, laboratory tests, and referral for an annual mammogram. Nurse case management is also provided for patient follow-up in the event of abnormal test results. Patients are encouraged to receive all services; however, the patient retains the right to refuse any part of the exam.

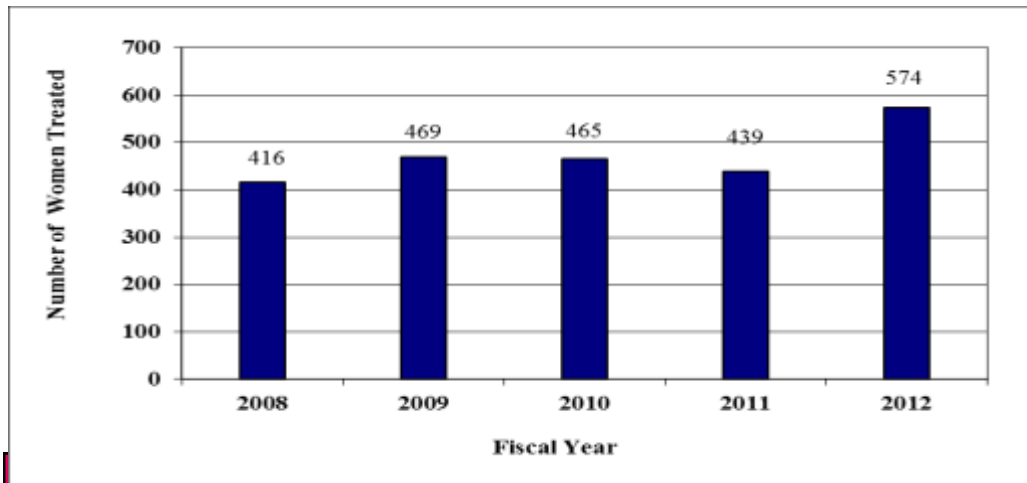
Local health departments contract with local providers for mammograms and diagnostic tests. In counties where there is not a certified mammography facility or where an agreement cannot be established, a contract is established with a neighboring county or with a mobile mammography unit. The KWCSF staff members provide technical assistance to local health departments to identify providers and assist with funding to ensure transportation is available for patients to attend their medical appointments.

Local health department clients who receive abnormal breast cancer screening results are referred to providers for follow-up diagnostic services, including diagnostic mammography. For services for which no funds are available, or for services not covered by third party payers, local health departments negotiate with local providers to provide these services to patients at a minimal cost. The LHD staff, with technical assistance from KWCSF, assists with enrolling and initiating necessary referrals to the Department for Medicaid Services' (DMS) Breast and Cervical Cancer Treatment Program (BCCTP) for the treatment of women with no health care coverage.

## **Breast and Cervical Cancer Treatment Program**

On October 1, 2002, Breast and Cervical Cancer Treatment Funds became available through the KWCSF for women who were screened for breast cancer. DMS added coverage through special eligibility processes to enroll women who require treatment for breast or cervical cancer or precancerous conditions. Since 2002, the KWCSF has collaborated with DMS to provide treatment to 4,357 women through the BCCTP. Without the availability of the

screening and diagnostic services and the treatment referrals, these women might not have been diagnosed or received treatment for breast or cervical cancer or precancerous conditions (Figure 9).



**Figure 9. Number of Women Treated through the BCCTP, FY 2008-2012 (Source:**

## **Public Education and Outreach**

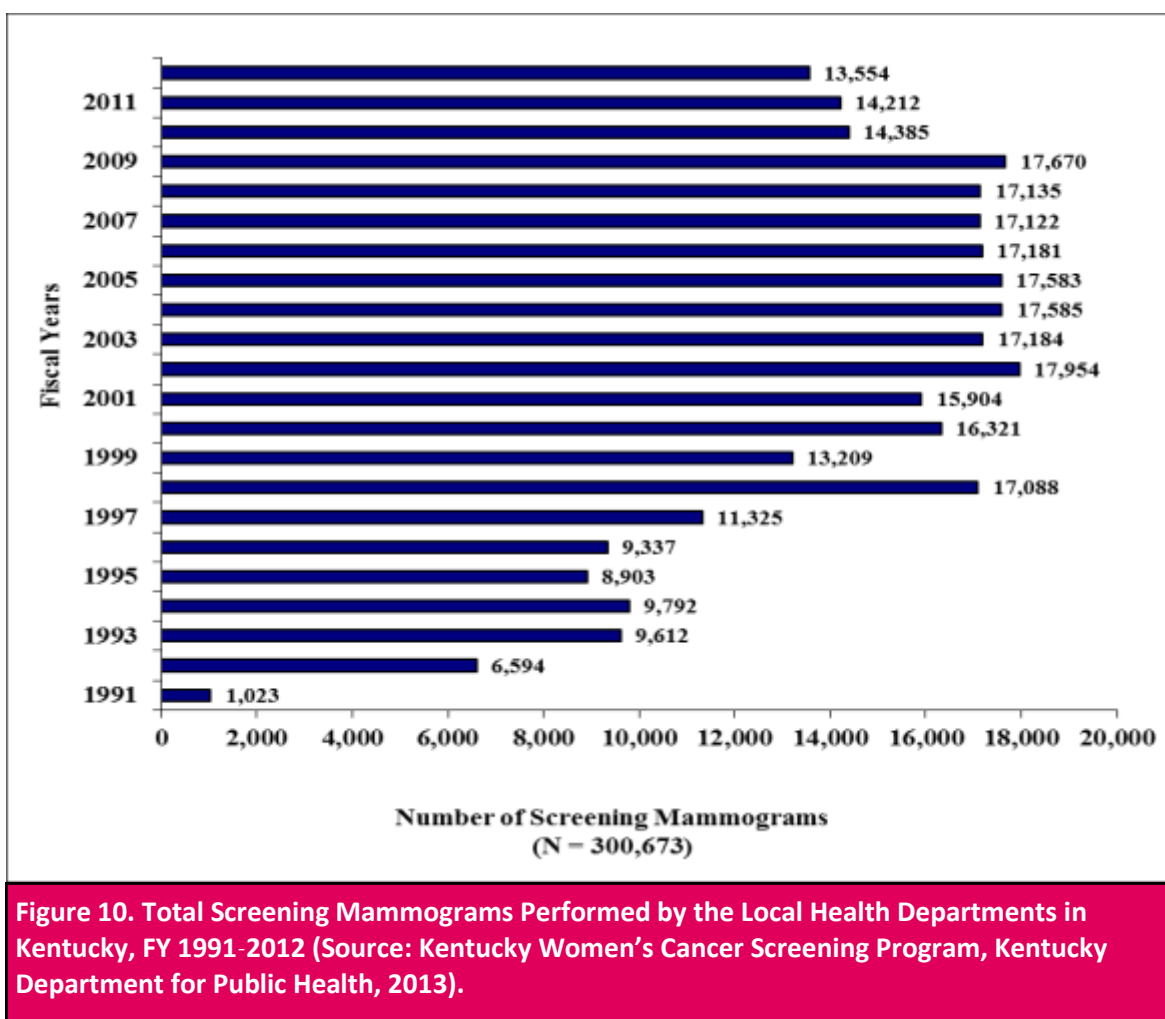
Public education and outreach is essential for recruiting women for breast cancer screening services. Community cancer coalitions and district cancer councils have implemented events to increase the awareness of the need for breast cancer screenings. The KWCSF helped plan and support local outreach initiatives that included educational presentations, distribution of educational materials, health fairs, professional education and awareness, newspaper and radio articles, press releases, and public service announcements.

## **Clinical Services Report**

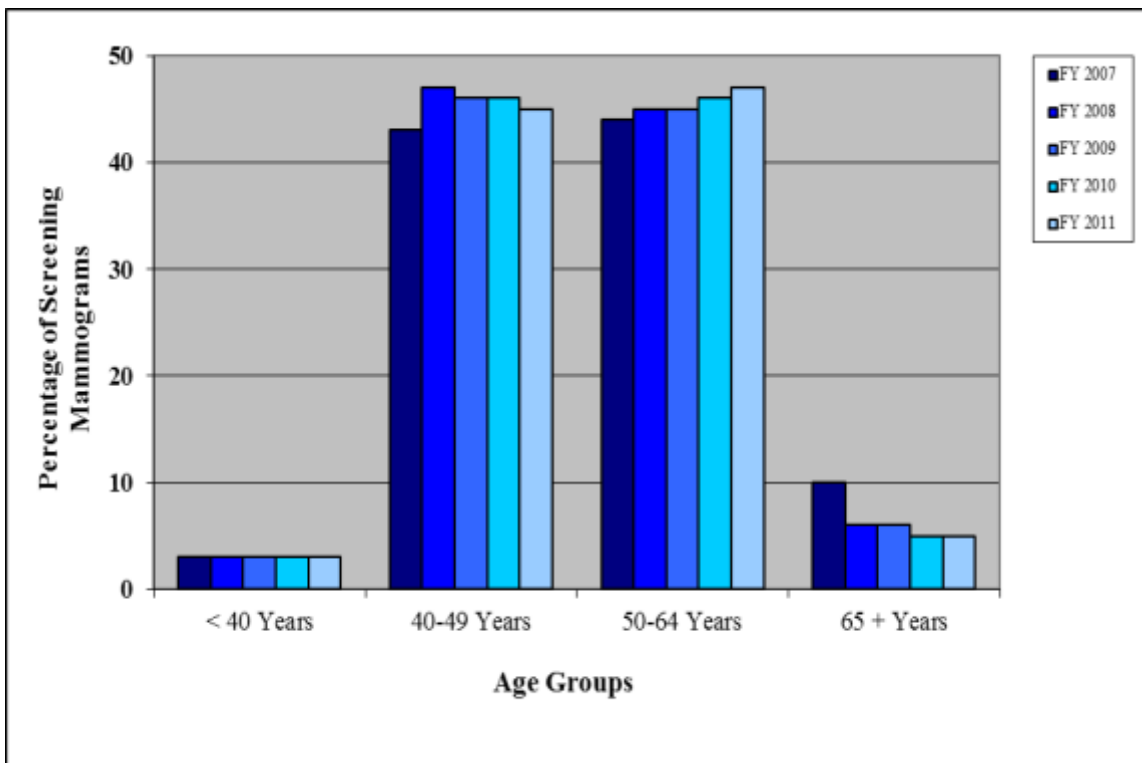
### **Screening Mammograms**

Since 1991, a total of 300,673 screening mammograms have been performed through Kentucky's LHDs (Figure 10). An apparent decrease in the number of screening mammograms performed by the LHDs in FY 2010, FY 2011, and FY 2012 can be partly attributed to improved data quality and correction of duplicated services previously reported. The Kentucky Department for Public Health staff provides trainings to LHD staff on the reporting of technical and professional components of a screening mammogram including Current Procedural Terminology (CPT) codes. Of the 13,554 screening mammograms provided by LHDs in FY 2012, 11,096 were provided to KWCSF eligible women. The KWCSF provides screening services to at least 20% of women eligible for the program. This percentage is similar to the national average.



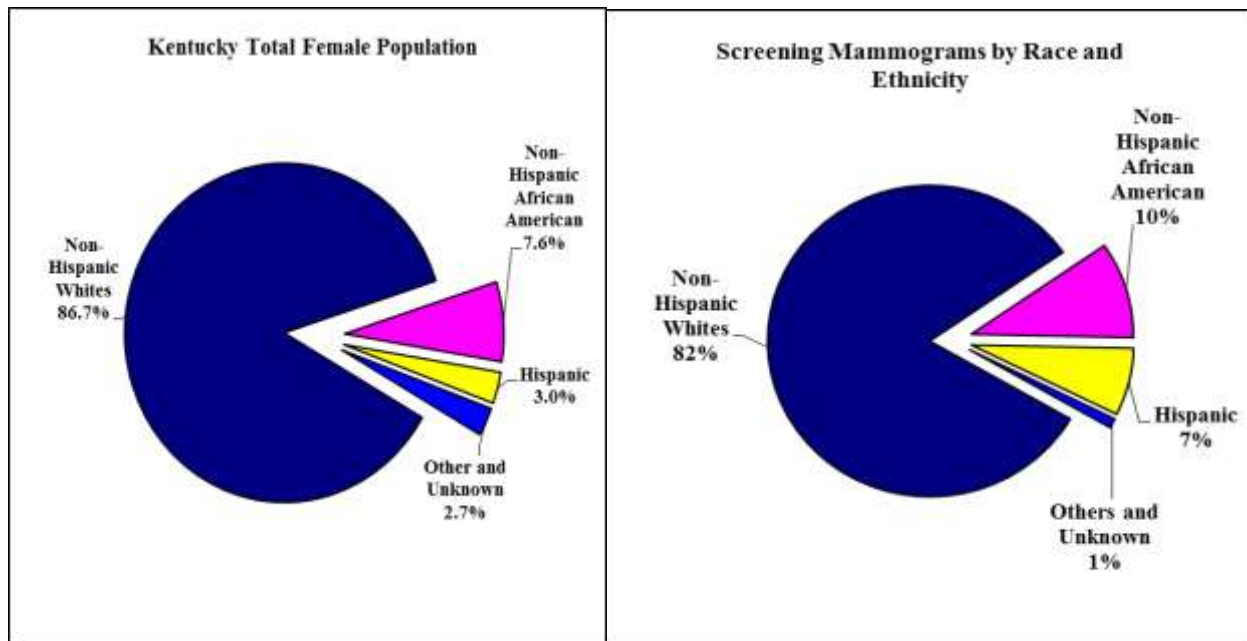


From FY 2008 to FY 2012, the percentage of screening mammography among all age groups has remained relatively stable (Figure 11). In FY 2011, 97% of screening mammograms performed through local health departments were provided to women 40 years old and older. Of these women, 45% were ages 40-49; 45% were ages 50-64; and 5% were ages 65 and older. Results of several large studies indicate that screening mammograms reduce the number of deaths from breast cancer for women over 40 years old and especially for women over 50 years old. Since guidelines do not recommend routine screenings for women younger than age 40, a lower percentage of screening mammograms for this age group is to be expected. However, women under 40 years old are provided mammograms at local health departments if they have symptoms or a family history of pre-menopausal breast cancer. Women 65 years and older who are eligible for Medicare may choose to obtain screening mammography services from private providers instead of the local health departments. This is the most likely explanation for the lower percentage of women 65 years and older who received screening mammograms through local health departments compared to other age groups.



**Figure 11. Percentage of Screening Mammograms Performed Through Local Health Departments in Kentucky by Age Groups, FY 2008-2012 (Source: KWCSP, Kentucky Department for Public Health, 2013).**

In FY 2012, 86.7% of the state's female population was Non-Hispanic White; 7.6% Non-Hispanic African American; 3.0% others and unknown; and 2.7% Hispanic. Of the state's female population, the majority of screening mammograms (82.%) were provided to Non-Hispanic White women. The remaining screening mammograms were divided among Non-Hispanic African Americans (10%); Hispanics (7%); and Others and Unknowns (1%), which includes Asians and American Indian women (Figure 12). Table 1 shows the number of screening mammograms performed from FY 2007-FY 2012 through local health departments in each of the 15 Area Development Districts.

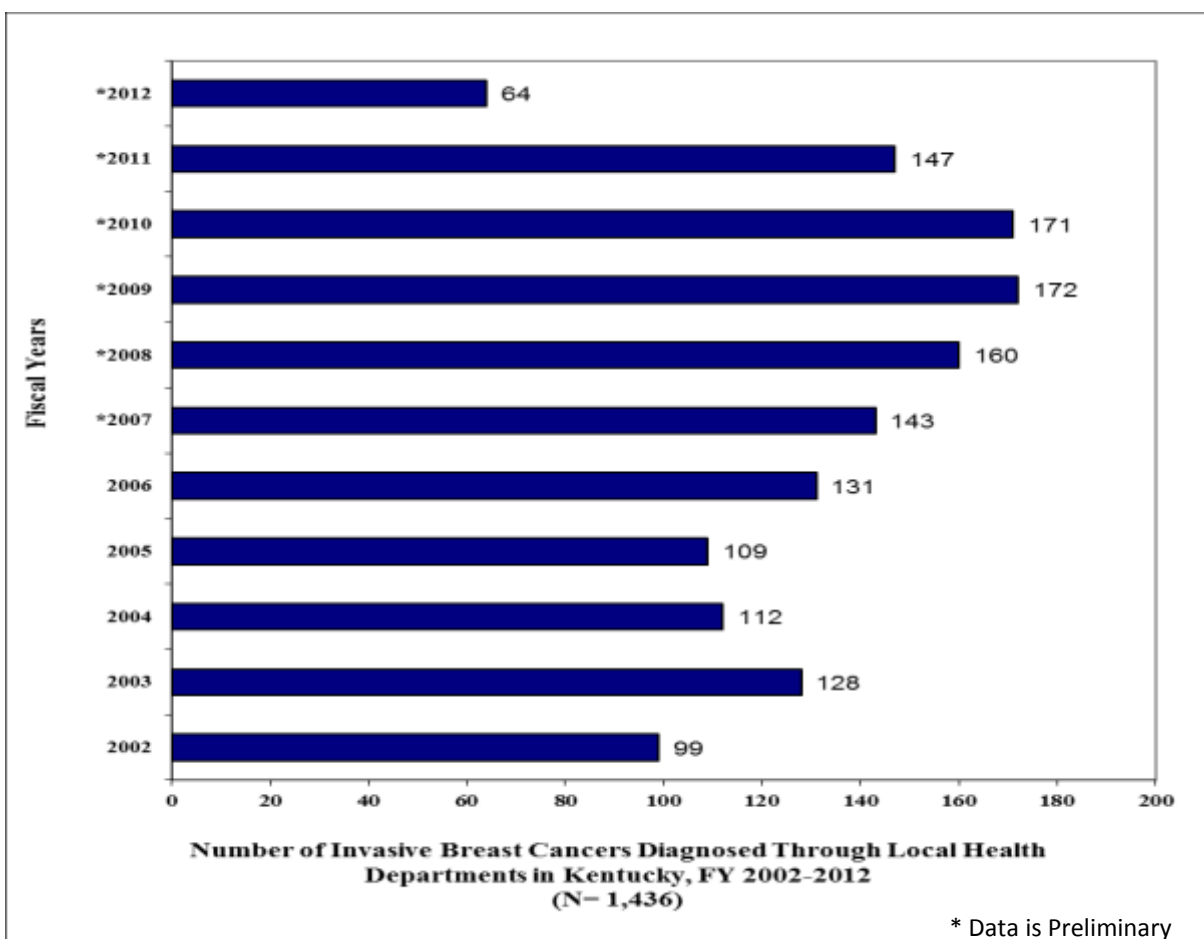


**Figure 12. Percentage of Kentucky Total Female Population vs. Screening Mammograms Performed Through Local Health Departments in Kentucky by Race and Ethnicity, FY 2012 (Source: Kentucky Women's Cancer Screening Program, Kentucky Department for Public Health, 2013 and U.S. Census Bureau, 2010 Census).**

<b>Area Development District</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
1. Barren River	783	930	878	779	838
2. Big Sandy	902	815	777	844	828
3. Bluegrass	2040	2438	2498	2539	2698
4. Buffalo Trace	213	256	252	252	218
5. Cumberland Valley	1430	1563	1395	1352	1264
6. FIVCO	783	746	645	591	467
7. Gateway	299	388	354	321	378
8. Green River	699	769	760	666	640
9. Kentucky River	1260	1243	1174	1087	984
10. KIPDA	4856	4131	1627	1793	1371
11. Lake Cumberland	1055	1313	1086	1018	883
12. Lincoln Trail	701	760	712	671	679
13. Northern Kentucky	285	427	377	401	370
14. Pennyryle	751	828	856	838	804
15. Purchase	1078	1063	994	1060	1131
<b>Total</b>	<b>17,135</b>	<b>17,670</b>	<b>14,385</b>	<b>14,212</b>	<b>13,553</b>

## Outcomes

Kentucky's local health departments detected 2,241 cases of breast cancer (pre-cancer and invasive cancers) in women from FY 1991 through FY 2012. Sixty-four percent (1,436) of these breast cancer cases were detected during fiscal years 2002 to 2012 (Figure 12). Figure 13 shows an increase in the detection of breast cancers identified through the local health departments from FY 2002 through FY 2006 . Data for FY 2007– FY 2012 is still preliminary and may change when it is finalized. The program staff partnered with the Kentucky Cancer Registry and the Centers for Disease Control and Prevention to assure duplicate records were identified and corrected in the program's cancer database. KWCSF staff utilized new software technologies to improve the accuracy of the data. Information for FY 1991- FY 2001 is available upon request.



**Figure 13. Total Number of Invasive Breast Cancers Diagnosed through Local Health Departments in Kentucky, FY 2002-2012. (Source: Kentucky Cancer Registry and the Kentucky Women's Cancer Screening Program, Kentucky Department for Public Health, 2013).**

## Quality Assurance

Continuous quality assurance activities promote the quality of service delivery at local health departments, contracted providers, mammography facilities, and laboratories. The KWCSF is required to submit reports twice each year to provide feedback to the CDC on performance indicators which measure the timeliness and appropriateness of care provided. The KWCSF is required to provide patients a final diagnosis and treatment within the CDC's standard for quality of care. The CDC data analysis shows that the KWCSF patients meet the expected CDC standard for women who receive complete follow-up (Table 2).

The CDC uses the KWCSF program data to generate Kentucky's Data Quality Indicator Guide (DQIG). These indicators represent important aspects of patient care and 11 of the 70 indicators compose the program's core performance; five of these indicators relate to breast cancer and six indicators relate to cervical cancer. Based on the FY 2012 CDC report on the KWCSF's Core Performance Indicators, the program met or exceeded the CDC standards for quality of cancer services for the last 7.5 years.

Table 2. Breast Cancer Quality of Care Core Program Performance Indicators Kentucky Women's Cancer Screening Program, FY 2012					
Program Performance Indicator	CDC Standard	Kentucky Results		National Results	
		Percentage	Standard Met?	Percentage	Standard Met?
Screening Mammograms Provided to Women > 50 years of age	≥ 75%	100.0% (5,820/5,820)	YES	87.1%	YES
Abnormal Breast Cancer Screening Results with Complete Follow-up	≥ 90%	90.3% (2,397/2,655)	YES	95.6%	YES
Abnormal Breast Cancer Screening Results; Time from Screening to Diagnosis > 60 Days	≤ 25%	7.7% (184/2,396)	YES	6.8%	YES
Treatment Started for Breast Cancer	≥ 90%	97.5% (116/119)	YES	97.3%	YES
Breast Cancer; Time from Diagnosis to Treatment > 60 days	≤ 20 %	12.3% (14/114)	YES	6.4%	YES

Clinical benchmarks developed and implemented to standardize the quality assurance review process correlate with standards established by the CDC's National Breast and Cervical Cancer Early Detection Program (NBCCEDP). The KWCSF quality assurance review process includes targeted activities to identify opportunities for program improvement and identifies local health departments in need of further assessment or technical assistance.

In FY 2012, quality assurance activities included routine site visits at local health departments throughout Kentucky. During a site visit, the state Case Management Coordinator (CMC) reviews the patient follow-up tracking system and external healthcare provider contracts. The CMC assesses local health department compliance with federal and state program guidelines and policies, as well as needs for training and technical assistance to assure the continuity of appropriate and timely quality care. The utilization of a standardized quality assurance tool during chart reviews assures that specific criteria and standards are being reviewed and consistently measured at each site. Any issues or concerns identified during the site visit are immediately addressed by the CMC with the local health department. All findings are also communicated to the local health department in writing within 14 days of the site visit. If applicable, a written plan of correction may be requested from the local health department and a follow-up review is conducted by the CMC to assure appropriate actions were taken to resolve issues.

## **Clinical Standards**

Clinical standards, including timetables for screening, diagnostic follow-up, and case management, are established for the local health departments through the Core Clinical Service Guide (CCSG). The CCSG is updated annually and reflects current nationally recognized research and best practices. This reference contains the standards by which services are evaluated through routine and focused quality assurance activities. In accordance with nationally recommended screening guidelines, the CCSG's guidelines for breast cancer screenings recommend that annual clinical breast exams be provided beginning at age 21 and annual screening mammograms be provided beginning at age 40. All women with an abnormal clinical breast examination, regardless of age, are referred for surgical consultation for further evaluation. In addition, clinical protocols and practices are reviewed by the KWCSF Breast Cancer Medical Advisory Committee (BCMAM), which includes radiologists, surgeons, and clinical pathologists. The BCMAM provides clinical expertise and advice regarding standards of care to promote quality services.

## **Case Management**

The goal of case management is for all women enrolled in the KWCSF to receive accessible, timely, and medically appropriate screenings and referrals for diagnostic and treatment services. Each local health department is required to designate a Nurse Case Manager (NCM) who utilizes a patient tracing system to assure complete and timely tracking and follow-up for all women with abnormal screening and diagnostic test results. Using a patient reminder tool, the NCM assists patients with case management services and follow-up services at appropriate screening intervals. Additionally the NCM is responsible for the development and

implementation of an appropriate plan of care, coordination of patient care with providers, individualized patient counseling and education on test results and procedures, and ongoing review of the patient's plan of care to assure adherence to the current CCSG.

## **Professional Development**

In collaboration with the KWCSF, the University of Louisville Professional Education Coordinator with the Kentucky Cancer Program (KCP) promoted eight web based training modules for Kentucky providers entitled; "How to Best Utilize the State's Breast and Cervical Cancer Screening and Treatment Programs"; "Who are the Never or Rarely Screened? Part I and II"; "Cancer Screening and Follow-Up Using Kentucky's Public Health Practice Reference"; "How Physicians and Their Practices Can Best Utilize the State's Breast and Cervical Cancer Screening and Treatment Programs"; "Nurse Case Management, Helping Women with Abnormal Results"; "Documentation for Abnormal Breast and Cervical Cancer Screening"; and "Clinical Breast Examination Proficiency and Risk Management." Since 2008, 1,641 users completed online continuing education modules on Kentucky's Public Health Online Training System (TRAIN). In FY 2012, the KCP provided seven presentations to medical professional groups at regional and statewide meetings regarding the Kentucky Women's Cancer Screening Program and the Breast and Cervical Cancer Treatment Program. In addition, KCP provided four Clinical Breast Examination Proficiency and Risk Management Training Courses for local health department personnel.

## **Data Monitoring**

The National Breast and Cervical Cancer Early Detection requires the KWCSF to collect an expanded data set that includes 101 data elements referred to as the Minimum Data Elements (MDEs). These data elements are collected from the local health departments in Kentucky to measure and analyze the effectiveness and efficiency of the program in order to address areas of concern. MDEs are reported twice yearly to the CDC which provides feedback on the program's performance after each data submission. The CDC reviews the program's data report to determine whether standards are met for NBCCEDP performance indicators. Continued quality assurance efforts have contributed to improvements in data management as well as in the collection and reporting of data for services provided by the KWCSF.

Throughout FY 2012, the program continued efforts to streamline the data collection and reporting system. For example the KWCSF implemented data management tools to review vendor data files and assess, on a monthly basis, the completeness, accuracy, and timeliness of the data reported in the data management vendor's file. As a result of this and other efforts, the KWCSF met 68 of 70 indicators and submitted 99.5% complete data to CDC in FY 2012.

Although changes to the data collection and reporting process have resulted in dramatic improvements in data timeliness and completeness, the program continues to address challenges in data management systems as identified through the program's quality assurance monitoring. Quality assurance monitoring of local health department performance is accomplished through analysis of data files and site visits to determine local health department needs for technical assistance and program performance improvements. Ongoing assessment is necessary to ensure completeness and accuracy of eligibility, clinical screening, and diagnostic service data, as well as quality of services and fiscal accountability.

## **Financial Progress Report**

### **Funding Sources**

The KWCSF is supported by state, federal, and local funds. The majority of the funds pay for clinical services for eligible women, including diagnostic follow-up tests. The remainder of the funds support administrative and infrastructure costs, including program staff personnel costs, professional training programs for nurses and practitioners, outreach efforts, and other program activities. The KWCSF staff provides oversight and monitors contracts with universities and memoranda of agreements with the local health departments that support cancer screening services, follow-up diagnostic tests, case management, local outreach projects, and community based staff. Local health departments supplement the funding for breast cancer screening services through local tax appropriations.

### **Financial Data (FY 2001 – 2012)**

Table 3 reflects federal and state funds expended on breast and cervical cancer screening and follow-up for the past 12 years. Data prior to 2001 is available upon request.

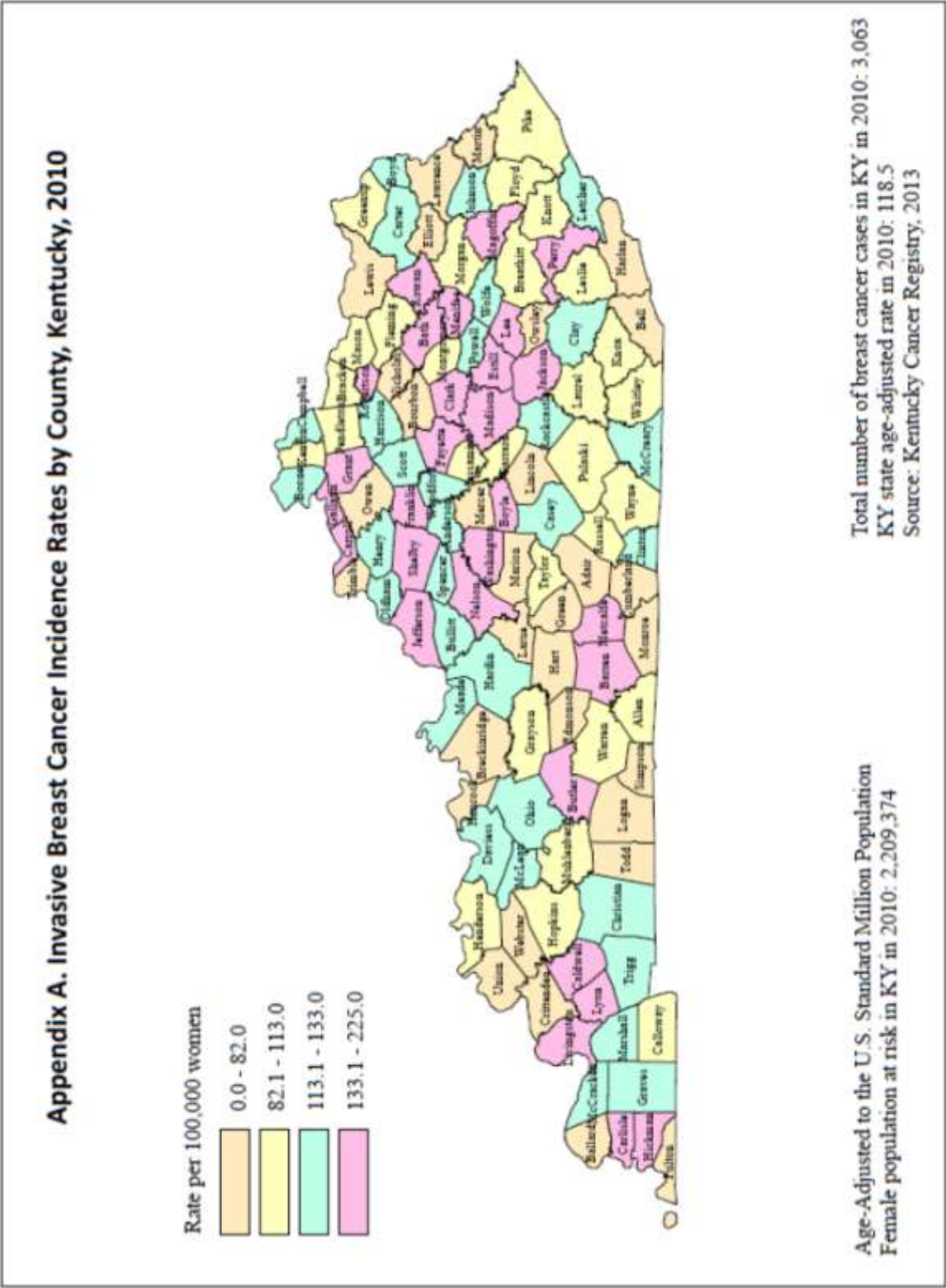
Each column of the table summarizes the expenses paid by the program in each fiscal year for clinical and non-clinical services. Clinical services include breast and cervical cancer screening office visits, screening tests, and diagnostic services. Non-clinical services include case management, data collection and processing, personnel, and outreach activities. The last column reflects the total of expenditures of these services/activities for each fiscal year. The average cost of breast cancer screening and diagnostic services, including those patients who received clinical breast exams, screening, and diagnostic mammograms, was \$213.45 per woman.



**Table 3. Federal and State Funds Expended on Breast and Cervical Cancer Screenings and Follow-up through Local Health Departments, FY 2001- FY 2012**

	Federal					State					Total
FY	Allocation	Clinical Services	%	Non Clinical Costs	%	Allocation	Clinical Services	%	Non Clinical Costs	%	
2001	\$ 1,751,748	\$ 1,341,283	77	\$ 410,465	23	\$ 2,586,368	\$ 2,586,368	100	\$0	0	\$ 4,338,116
2002	\$ 1,861,038	\$ 1,363,731	73	\$ 497,307	27	\$ 2,600,000	\$ 2,600,000	100	\$0	0	\$ 4,461,038
2003	\$ 2,610,517	\$ 1,658,985	64	\$ 951,532	36	\$ 2,599,997	\$ 2,599,997	100	\$0	0	\$ 5,210,514
2004	\$ 2,516,239	\$ 1,871,745	74	\$ 644,494	26	\$ 2,544,953	\$ 2,544,953	100	\$0	0	\$ 5,061,192
2005	\$ 2,502,100	\$ 1,558,286	62	\$ 943,814	38	\$ 2,460,000	\$ 2,460,000	100	\$0	0	\$ 4,962,100
2006	\$ 2,377,223	\$ 1,610,754	68	\$ 766,469	32	\$ 2,577,758	\$ 2,577,758	100	\$0	0	\$ 4,954,981
2007	\$ 2,580,118	\$ 1,759,541	68	\$ 820,576	32	\$ 2,867,280	\$ 2,867,280	100	\$0	0	\$ 5,447,397
2008	\$ 2,329,409	\$ 1,767,540	76	\$ 561,869	24	\$ 2,936,362	\$ 2,756,504	94	\$ 179,858	0	\$ 5,265,770
2009	\$ 2,352,703	\$ 1,604,550	68	\$ 748,153	32	\$ 3,046,553	\$ 2,817,194	92	\$ 229,358	8	\$ 5,399,255
2010	\$ 2,329,409	\$ 1,603,600	69	\$ 725,809	31	\$ 2,484,597	\$ 2,331,291	94	\$ 153,305	6	\$ 4,814,005
2011	\$ 2,708,945	\$ 1,903,600	70	\$ 805,345	30	\$ 2,433,052	\$ 2,268,382	93	\$ 164,670	7	\$ 5,141,997
2012	\$ 2,709,053	\$ 1,975,467	73	\$ 733,586	27	\$ 2,436,745	\$ 2,391,368	98	\$ 45,377	2	\$ 5,145,798
Total	\$ 28,628,502	\$ 20,019,082	70	\$ 8,609,419	30	\$ 31,573,665	\$ 30,801,095	98	\$ 772,570	2	\$ 60,202,166

# APPENDIX A



APPENDIX B

Appendix B. Invasive Breast Cancer Mortality Rates by County, Kentucky, 2010



Age-Adjusted to the U.S. Standard Million Population  
Female population at risk in KY in 2010: 2,209,374

Total number of deaths due to breast cancer in KY in 2010: 584  
KY state age-adjusted rate in 2010: 21.76  
Source: Kentucky Cancer Registry, 2013

## APPENDIX C

### Glossary

**Age-Adjusted:** A weighted average of the age-specific or crude rates, where weights are the proportions of persons in the corresponding age groups of a standard million population.

**Benign:** A condition that is not cancerous.

**Biopsy:** A procedure to obtain a small amount of tissue for microscopic analysis to establish a precise diagnosis.

**Breast Carcinoma, In Situ:** An early form of breast cancer characterized by absence of invasion of surrounding breast tissues, with no spreading of cancer cells beyond the milk ducts or milk-producing glands.

**Breast Carcinoma, Invasive:** A form of breast cancer characterized by the invasion of surrounding breast tissue, with spreading of cancer cells beyond the milk ducts or milk glands.

**Breast Cancer Rates:** Calculations are based on invasive breast cancers.

**Incidence:** Rate of new cancers of a specific site/type occurring in a specified population during a year, expressed as the number of cancers per 100,000 people.

**Malignant:** The medical term for cancer, referring to the abnormal division of cells which can spread through the body.

**Mammogram:** A form of breast x-ray used to detect breast cancer.

**Mammogram, Screening:** Two x-ray views of each breast typically used when a physical exam shows no signs or symptoms of breast cancer.

**Mammogram, Diagnostic:** Two or more x-ray views of one or both breasts, typically used when a physical exam or screening mammogram shows signs or symptoms of breast cancer.

**Payer:** Agency responsible for paying for services performed through local health departments; includes the Kentucky Women's Cancer Screening Program, Medicaid, Medicare, commercial insurance, and the client herself (self-pay).

**Prevalence:** Total number of people with a specific site/type of cancer at a particular moment in time in the entire population.

**Ultrasound, Breast:** An imaging procedure using high-frequency sound waves to create an image of a change in breast tissue.

## **APPENDIX D**

### **Kentucky Statutes and Administrative Regulations**

#### **1. Kentucky Women's Cancer Screening Program**

##### **KRS 214.550 Definitions for KRS 214.552 to 214.556.**

As used in KRS 214.552 to 214.556:

- (1) "Department" means the Department for Public Health of the Cabinet for Health and Family Services.
- (2) "Fund" means the breast cancer screening fund.
- (3) "Screening" means the conduct of screening mammography for the purpose of ascertaining the existence of any physiological abnormality which might be indicative of the presence of disease.

**Effective:** June 20, 2005

**History:** Amended 2005 Ky. Acts ch. 99, sec. 461, effective June 20, 2005. -- Amended 1998 Ky. Acts ch. 426, sec. 408, effective July 15, 1998. -- Amended 1994 Ky. Acts ch. 184, sec. 1, effective July 15, 1994. -- Created 1990 Ky. Acts ch. 318, sec. 2, effective July 1, 1990.

##### **KRS 214.554 Breast Cancer Screening Program -- Breast Cancer Advisory Committee -- Annual report.**

- (1) There is established within the department a Breast Cancer Screening Program for the purposes of:
  - (a) Reducing morbidity and mortality from breast cancer in women through early detection and treatment; and
  - (b) Making breast cancer screening services of high quality and reasonable cost available to women of all income levels throughout the Commonwealth and to women whose economic circumstances or geographic location limits access to breast cancer screening facilities.
- (2) Services provided under the Breast Cancer Screening Program may be undertaken by private contract for services or operated by the department and may include the purchase, maintenance, and staffing of a truck, a van, or any other vehicle suitably equipped to perform breast cancer screening. The program may also provide referral services for the benefit of women for whom further examination or treatment is indicated by the breast cancer screening.
- (3) The department may adopt a schedule of income-based fees to be charged for the breast cancer screening. The schedule shall be determined to make screening available to the largest possible number of women throughout the Commonwealth. The department shall, where practical, collect any available insurance proceeds or other reimbursement payable on behalf of any recipient of a breast cancer screening under KRS 214.552 to 214.556 and may adjust the schedule of fees to reflect insurance contributions. All fees collected shall be credited to the fund.
- (4) The department may accept any grant or award of funds from the federal government or private sources for carrying out the provisions of KRS 214.552 to 214.556.
- (5) For the purpose of developing and monitoring the implementation of guidelines for access to and the quality of the services of the Breast Cancer Screening Program, there is hereby created a Breast Cancer Advisory Committee to the commissioner of the Department for Public Health which shall include the directors of the James Graham Brown Cancer Center and the Lucille Parker Markey Cancer Center, the director of the Kentucky Cancer Registry, the director of the Division of Women's Physical and Mental Health, one (1) radiologist with preference given to one who has been fellowship-trained in breast diagnostics and who shall be appointed by the Governor, one (1) representative of the Kentucky Office of Rural Health appointed by the Governor, one (1) repre-

sentative of the Kentucky Commission on Women appointed by the Governor, and at least three (3) women who have had breast cancer and who shall be appointed by the Governor.

(6) The commissioner of the Department for Public Health, in consultation with the Breast Cancer Advisory Committee, shall annually, but no later than November 1 of each year, make a report to the Governor, the Legislative Research Commission, and the Interim Joint Committees on Appropriations and Revenue and on Health and Welfare on the: (a) Implementation and outcome from the Breast Cancer Screening Program including, by geographic region, numbers of persons screened, numbers of cancers detected, referrals for treatment, and reductions in breast cancer morbidity and mortality;

(b) Development of quality assurance guidelines, including timetables, for breast cancer screening under this section, and monitoring of the manner and effect of implementation of those guidelines; and

(c) Funds appropriated, received, and spent for breast cancer control by fiscal year.

**Effective:** June 20, 2005

**History:** Amended 2005 Ky. Acts ch. 99, sec. 462, effective June 20, 2005. -- Amended 2003 Ky. Acts ch. 48, sec. 1, effective June 24, 2003. -- Amended 1998 Ky. Acts ch. 95, sec. 1, effective July 15, 1998; and ch. 426, sec. 409, effective July 15, 1998. -- Amended 1994 Ky. Acts ch. 184, sec. 2, effective

## 2. Breast and Cervical Cancer Treatment Program

### **907 KAR 1:805. Breast and cervical cancer eligibility for Medicaid.**

RELATES TO: 42 U.S.C. 1396a(aa)

STATUTORY AUTHORITY: KRS 194A.030(2), 194A.050(1), 205.520(3), EO 2004-726

NECESSITY, FUNCTION, AND CONFORMITY: EO 2004-726, effective July 9, 2004, reorganized the Cabinet for Health Services and placed the Department for Medicaid Services and the Medicaid Program under the Cabinet for Health and Family Services. The Cabinet for Health and Family Services, Department for Medicaid Services, has responsibility to administer the Medicaid Program. KRS 205.520(3) authorizes the cabinet, by administrative regulation, to comply with any requirement that may be imposed, or opportunity presented, by federal law for the provision of medical assistance to Kentucky's indigent citizenry. This administrative regulation establishes the requirements for the determination of Medicaid eligibility for low-income, uninsured women under the age of sixty-five (65) who have been identified by the Kentucky Women's Cancer Screening Program and are in need of treatment for breast or cervical cancer, including a precancerous condition and early stage cancer.

Section 1. Definitions. (1) "Cabinet" means the Cabinet for Health and Family Services.

(2) "CDC" means the federal Centers for Disease Control and Prevention.

(3) "Creditable coverage" is defined in KRS 304.17A-005(7).

(4) "Department" means the Department for Medicaid Services or its designated agent.

(5) "Kentucky Women's Cancer Screening Program" means the program administered by the Department for Public Health which provides breast and cervical cancer screening and diagnostic services to low-income, uninsured or underinsured women using both state funds and monies from the Centers for Disease Control and Prevention's National Breast and Cervical Cancer Early Detection Program, including Title XV funds.

(6) "Qualified alien" means an alien who, at the time the alien applies for or receives Medicaid, meets the requirements established in 907 KAR 1:011, Section 5(12)(a)1b or c.

Section 2. Eligibility Criteria. A woman shall be eligible for Medicaid benefits if she:

(1) Has not attained the age of sixty-five (65);

(2) Is a United States citizen or qualified alien;

(3) Is a resident of Kentucky;

(4) Is not an individual described in any of the mandatory Medicaid categorically-needy eligibility groups;

(5) Is not a resident of a public institution in accordance with 907 KAR 1:011, Section 6;

(6) Has been:

(a) Screened for breast or cervical cancer under the Kentucky Women's Cancer Screening Program; and

(b) Found to need treatment for breast or cervical cancer, including a precancerous condition or early stage cancer;

(7) Does not have creditable coverage unless the treatment of breast or cervical cancer is not:

(a) A covered service; or

(b) Covered due to:

1. Exclusion as a preexisting condition;

2. An HMO affiliation period; or

3. Exhaustion of a lifetime limit on benefits; and

(8) Has provided a Social Security number in accordance with 907 KAR 1:011, Section 11.

Section 3. Limitation. A woman who is determined to require routine monitoring services for a precancerous breast or cervical condition shall not be considered to need treatment.

Section 4. Eligibility Period. (1) Medicaid eligibility may be effective three (3) months prior to the month of application.

(2) The length of Medicaid eligibility shall be as follows:

(a) Four (4) months for the treatment of breast cancer;

(b) Three (3) months for the treatment of cervical cancer; and

(c) Two (2) months for the treatment of precancerous cervical or breast disorder.

(3)(a) The department may grant an extension of eligibility if further treatment is necessary for breast or cervical cancer or a precancerous cervical or breast disorder.

(b) To request an extension, the treating provider shall complete a MAP-813D, Breast and Cervical Cancer Treatment Program Request for Extension of Eligibility, and submit it to the department.

(c) After receipt of the completed MAP-813D, the department shall notify the recipient of the eligibility extension period.

(4) If the age of sixty-five (65) is attained during an eligible period, Medicaid eligibility shall be terminated at the end of the birth month.

Section 5. Department for Public Health Responsibilities. A local health department shall:

(1) In a joint effort with an applicant, complete a MAP-813B, BCCTP Eligibility Screening Form, to determine if the recipient is potentially eligible for Medicaid in another eligibility category;

(2) Refer the applicant to the local Department for Community Based Services office if she is potentially eligible in another Medicaid group;

(3) If the applicant is determined to meet the eligibility criteria established in Section 2 of this administrative regulation:

(a) In conjunction with the applicant, complete a MAP-813, Breast and Cervical Cancer Treatment Program Application; and

(b) Contact the department to obtain an authorization number; and

(4) If an authorization number is received, provide the applicant's eligibility information to the department.

Section 6. Recipient Responsibilities. The recipient shall be responsible for reporting to the department within ten (10) days a change in:

(1) Breast or cervical cancer treatment status;

(2) Creditable health insurance coverage;

(3) Address; or

(4) Another circumstance which may affect eligibility.

Section 7. Appeal Rights. (1) An appeal regarding the Medicaid eligibility of an individual shall be conducted in accordance with 907 KAR 1:560.

(2) If a woman is determined ineligible for the Kentucky Women's Cancer Screening Program, the appeal procedures shall be in accordance with 902 KAR 1:400.

Section 8. Incorporation by Reference. (1) The following material is incorporated by reference:

(a) "MAP-813B, BCCTP Eligibility Screening Form, September 9, 2002 edition," Department for Medicaid Services;

(b) "MAP-813, Breast and Cervical Cancer Treatment Program Application, January 15, 2003 edition," Department for Medicaid Services; and

(c) "MAP-813D, Breast and Cervical Cancer Treatment Program Request for Extension of Eligibility, January 15, 2003 edition," Department for Medicaid Services.

(2) This material may be inspected, copied, or obtained, subject to applicable copyright law, at the Department for Medicaid Services, 275 East Main Street, Frankfort, Kentucky 40621, Monday through Friday, 8 a.m. through 4:30 p.m. (30 Ky.R. 181; eff. 8-20-2003.)